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10/689,114	10/19/2003	Matthew A. Huras	YOR920030458US1 (590.118)	2917

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EXAMINER	
CHEN, QING	

ART UNIT	PAPER NUMBER
2191	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/689,114	HURAS ET AL.	
	Examiner	Art Unit	
	Qing Chen	2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 March 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-9,11-14,16-20,22 and 23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-9,11-14,16-20,22 and 23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office action is in response to the amendment filed on March 21, 2008.

2. **Claims 1-3, 5-9, 11-14, 16-20, 22, and 23** are pending.

3. **Claims 1, 3, 11, 12, 14, 16-20, 22, and 23** have been amended.

4. **Claims 4, 10, 15, and 21** have been cancelled.

5. The objections to the specification are withdrawn in view of Applicant's amendments to the specification.

6. The objections to Claims 1-3, 5-9, 11-14, 16-20, 22, and 23 are withdrawn in view of Applicant's amendments to the claims.

7. The 35 U.S.C. § 101 rejections of Claims 1-3, 5-9, and 11 are withdrawn in view of Applicant's amendments to the claims.

Response to Amendment

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. **Claims 1-3, 5-9, 11-14, 16-20, 22, and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over **US 2003/0088605 (hereinafter "Beghtel")** in view of **US 6,834,386 (hereinafter "Douceur")**.

As per **Claim 1**, Beghtel discloses:

- an arrangement for determining at least one utility within the computer system *(see Paragraph [0021], "Computer subsystem 220 is suitable for executing tasks in accordance with the preferred embodiment and comprises high priority task 210 invoked by an online command utilizing terminal 232 or by JCL 230. Computer subsystem 220 may also comprise other tasks, such as one or more online transaction tasks 212.")*;

- an arrangement for deriving a throttling level for the at least one utility which quantifies the reduction in the rate at which the at least one utility consumes resources *(see Paragraph [0023], "High priority task 210 receives a throttle specification, in step 310, from the invoking operating system or subsystem. The throttle specification is in the form of a recommended percentage value where the value represents the percentage of CPU cycles available to high priority task 210 to be dedicated to high priority task 210.")*; and

- wherein said arrangement for optionally inserting the derived throttling level is implemented within the at least one utility *(see Paragraph [0027], "Following the calculation of a suspension time in step 340, high priority task 210 is suspended, in step 345, for the duration of this calculated suspension time.")*.

However, Beghtel does not disclose:

- an arrangement for optionally inserting the derived throttling level at a selected point during execution of the at least one utility.

Douceur discloses:

- an arrangement for optionally inserting the derived throttling level at a selected point during execution of the at least one utility *(see Column 7: 33-56, "In general, the execution of each task is quantized into time slices, whereby each task is permitted to execute for a set period of real time." and "A task may be given any CPU scheduling priority allowed by the system, e.g., normal priority, but may be throttled by the present invention by only allowing the task to operate for limited time slices at a low frequency relative to how often a foreground process is able to request CPU cycles.")*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Douceur into the teaching of Beghtel to include an arrangement for optionally inserting the derived throttling level at a selected point during execution of the at least one utility. The modification would be obvious because one of ordinary skill in the art would be motivated to prevent threads from interfering with each other's work *(see Douceur – Column 7: 22-32)*.

As per **Claim 2**, the rejection of **Claim 1** is incorporated; and Beghtel further discloses:

- wherein said arrangement for determining ascertains whether the at least one utility has indicated its presence with the computer system *(see Paragraph [0021], "Computer subsystem 220 is suitable for executing tasks in accordance with the preferred embodiment and comprises high priority task 210 invoked by an online command utilizing terminal 232 or by JCL 230. Computer subsystem 220 may also comprise other tasks, such as one or more online transaction tasks 212.")*.

As per **Claim 3**, the rejection of **Claim 2** is incorporated; and Beghtel further discloses:

- wherein indicating the presence of the at least one utility within the computer system comprises the at least one utility registering with a utility manager *(see Paragraph [0021], "Computer subsystem 220 is suitable for executing tasks in accordance with the preferred embodiment and comprises high priority task 210 invoked by an online command utilizing terminal 232 or by JCL 230. Computer subsystem 220 may also comprise other tasks, such as one or more online transaction tasks 212.").*

As per **Claim 5**, the rejection of **Claim 2** is incorporated; and Beghtel further discloses:

- wherein the derived throttling level is enforced through a self-imposed sleep *(see Paragraph [0027], "Following the calculation of a suspension time in step 340, high priority task 210 is suspended, in step 345, for the duration of this calculated suspension time.").*

As per **Claim 6**, the rejection of **Claim 2** is incorporated; however, Beghtel does not disclose:

- wherein the at least one utility is a multi-process utility and the derived throttling level is enforced by reducing the parallelism of multi-processes.

Douceur discloses:

- wherein the at least one utility is a multi-process utility and the derived throttling level is enforced by reducing the parallelism of multi-processes *(see Column 7: 22-32, "Although a single task may include multiple threads in order to maintain multiple contexts, in one implementation, only one thread is permitted to proceed at a time, in order to prevent*

threads from interfering with each other's work measurements." and "Task execution alternates between the threads (as determined by the process) in an attempt to maintain an approximately constant work queue depth.").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Douceur into the teaching of Beghtel to include wherein the at least one utility is a multi-process utility and the derived throttling level is enforced by reducing the parallelism of multi-processes. The modification would be obvious because one of ordinary skill in the art would be motivated to prevent threads from interfering with each other's work *(see Douceur – Column 7: 22-32).*

As per **Claim 7**, the rejection of **Claim 2** is incorporated; however, Beghtel does not disclose:

- wherein the derived throttling level is enforced by reducing the amount of memory used by the at least one utility.

Douceur discloses:

- wherein the derived throttling level is enforced by reducing the amount of memory used by the at least one utility *(see Column 7: 49-56, "A task may also be given a reduced CPU scheduling priority, whereby the CPU scheduling mechanism 116 will further control the cycles given to the background task 110_1. As represented in FIG. 5, the background task 110, may be thus limited in how often it is given access to the CPU 21 and/or how often it obtains access to an I/O resource 118 (e.g., a disk via an I/O manager 120).").*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Douceur into the teaching of Beghtel to include wherein the derived throttling level is enforced by reducing the amount of memory used by the at least one utility. The modification would be obvious because one of ordinary skill in the art would be motivated to limit the amount of work performed by the task.

As per **Claim 8**, the rejection of **Claim 2** is incorporated; however, Beghtel does not disclose:

- wherein the derived throttling level is enforced by changing the granularity of locking.

Douceur discloses:

- wherein the derived throttling level is enforced by changing the granularity of locking *(see Column 5: 31-35, "To avoid interfering with foreground processes via file locking conflicts, opportunistic locks are used by the groveler 60 when accessing a file, which temporarily suspend access to the file by another process until the groveler 60 can release it.")*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Douceur into the teaching of Beghtel to include wherein the derived throttling level is enforced by changing the granularity of locking. The modification would be obvious because one of ordinary skill in the art would be motivated to prevent threads from interfering with each other's work *(see Douceur – Column 5: 31-35)*.

As per **Claim 9**, the rejection of **Claim 2** is incorporated; and Beghtel further discloses:

- wherein the derived throttling level is enforced by reducing the amount of processing accomplished by the at least one utility *(see Paragraph [0027], "Following the calculation of a suspension time in step 340, high priority task 210 is suspended, in step 345, for the duration of this calculated suspension time.").*

As per **Claim 11**, the rejection of **Claim 2** is incorporated; and Beghtel further discloses:

- wherein the derived throttling level is enforced by reducing the operating system priority of the at least one utility *(see Paragraph [0010], "Prior to initiating the next unit of work for the computer task, the computer task is suspended for the calculated suspension time. In this manner, other important computing tasks operating in the computer system have access to critical computer resources during the suspension period.").*

Claims 12-14, 16-20, and 22 are method claims corresponding to the system claims above (Claims 1-3, 5-9, and 11) and, therefore, are rejected for the same reasons set forth in the rejections of Claims 1-3, 5-9, and 11.

Claim 23 is a program storage device claim corresponding to the system claim above (Claim 1) and, therefore, is rejected for the same reason set forth in the rejection of Claim 1.

Response to Arguments

10. Applicant's arguments with respect to Claims 1, 12, and 23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM. The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/QC/
June 14, 2008

/Wei Zhen/

Supervisory Patent Examiner, Art Unit 2191